REMARKS

In the Office Action dated January 12, 2006, the Examiner stated claims 10-15, which were added in Applicants' previous response, were withdrawn from consideration as being directed to a non-elected method, based on Applicants' previous election. Accordingly, claims 10-15 have been cancelled without prejudice to the possibility of making those claims the subject of a divisional application.

This leaves claims 1-3 as the only claims pending in the application, and those claims were rejected under 35 U.S.C. §103(a) as being unpatentable over Pla et al. in view of Takamori et al. This rejection is respectfully traversed for the following reasons.

The Examiner has taken the position that the Pla et al. reference discloses the subject matter of claim 1 of the present application, with the exception of not disclosing sealing of the entire component, screwing the segments together, and using a perforated anchoring plate as the fastening segment. The Examiner relied on the Takamori et al. reference as disclosing these features. The Examiner concluded it would have been obvious to a person of ordinary skill to modify the magnetic resonance system disclosed in the Pla et al. reference in accordance with the teachings of Takamori et al., because the Examiner stated the Pla et al. reference discloses only noise control, and states that the elements of such a noise control arrangement are typically arranged so as to be contained within a structure having a cylindrical bore in which an examination subject can be placed. The Examiner stated the Takamori et al. reference discloses such a system that would benefit from active noise control because only passive noise control is disclosed therein.

Applicants respectfully disagree with the Examiner's conclusions regarding the teachings of each of these references, insofar as the Examiner believes these teachings are somehow sufficiently compatible with each other so as to justify the Examiner's conclusion that it would have been obvious to modify the Pla et al. reference in accordance with the teachings of Takamori et al.

The Pla et al. reference discloses a magnetic resonance system in which mechanical, noise-producing oscillations are actively damped using an actuator. As shown in Figures 4a and 4b of the Pla et al. reference, the actuator 16′ is mounted on a so-called noise cancelling member 24 that is in turn fastened to the cylinder 12 by means of two elastic (resilient) fastening elements 26.

As the Examiner has noted, there is no teaching or suggestion in the Pla et al. reference that the actuator 16′ and/or the mounting elements therefor are embedded in a sealing compound. As the Examiner has also noted, the Pla et al. reference does not teach a fastening segment in the form of a perforated plate. Although not noted by the Examiner, it is also the case that the Pla et al. reference fails to teach that such a fastening segment, formed by a perforated plate, is located in a recess in the sealing compound, as also explicitly set forth in claim 1 of the present application.

As described in the introductory portion of the present specification, when an actuator is used for active damping of mechanical oscillations in a magnetic resonance imaging system, accounting for the force transfer between the actuators and the gradient coil structure is critical, because these forces are extremely high, such as an order of magnitude of 10 kN per actuator. It is important that the mounting or fastening of the actuator be free of any play, because flexing stresses

and torsion stresses in the actuator have a negative affect with regard to the proper functioning and life span of the actuator.

These problems are not even noted in the Pla et al. reference, and therefore the Pla et al. provides no teaching or suggestion whatsoever as to how such problems can (or even should) be addressed. In the Pla et al. reference, the actuators are fastened to elastic (resilient) mounting elements. There is no teaching in the Pla et al. reference as to how the aforementioned extremely high forces can be dealt with, and therefore the actuator disclosed in the Pla et al. reference is not free of flexing and torsion stresses.

As the Examiner has noted, the Takamori et al. reference does not make use of active damping at all, but instead simply teaches reinforcing the overall structure, as a means of passive damping. Therefore, a person of ordinary skill in the field of magnetic resonance imaging, seeking to solve the aforementioned problems with regard to mounting an actuator for active damping, would not even consult the Takamori et al. reference, since such a person would know in advance that the Takamori et al. reference makes use only of passive damping, and therefore it would be meaningless to consult the Takamori et al. reference in an effort to learn information or guidance with regard to structures for active damping. Applicants submit that if such a person of ordinary skill, seeking to solve a problem associated with mounting of an active damping element, had the insight to consult a reference that exclusively concerns passive damping, this would be an insight supporting patentability, rather than a reason for negating patentability.

Beyond the fact that the Takamori et al. reference provides no guidance to solve the problem to which the present invention is directed, Applicants respectfully

submit the Takamori et al. reference does not provide the teachings cited by the Examiner. In the Takamori et al. reference, the shield 4016 shown in Figures 20 and 21 is integrated into the overall cylindrical structure of the magnetic resonance scanner. Although the shield 4016 can have opening therein, as shown in Figures 20 and 21, these openings are not accessible for any type of mounting, and Applicants respectfully submit it would destroy the intended operation of the passive damping in the Takamori et al. reference, as well as the active damping in the Pla et al. reference, if those openings in the shield 4016 of the Takamori et al. reference were used for mounting components of any type.

Moreover, as noted above, claim 1 does not simply make use of a perforated plate as the fastening segment, but makes use of a perforated plate disposed in a recess in the sealing compound. No such structure is disclosed in the Takamori et al. reference, and therefore even if the Pla et al. reference, and therefore even if the Pla et al. reference were modified in accordance with the teachings of Takamori et al. (for reasons unknown to the present Applicants), the subject matter of claim 1 still would not result.

Claim 1, therefore would not have been obvious to a person of ordinary skill in designing an active damping arrangement for use in a magnetic resonance imaging system, based on the teachings of Pla et al. and Takamori et al., under the provisions of 35 U.S.C. §103(a). Claims 2 and 3 add further structure to the non-obvious combination of claim 1, and are submitted to be patentable over the Pla et al. and Takamori et al. references for the same reasons discussed above in connection with claim 1.

All claims of the application are therefore submitted to be in condition for allowance, and early reconsideration of the application is respectfully requested.

Submitted by,

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